baracoda™ | Data Capture For Workforce in Motion

Traceability division

Scanwear User Guide

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Bluetooth®

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Revision History

Changes to the original manual are listed below

Document	Date	Description
1.0	4 Sept. 07	Initial release
1.1	17 Sep. 07	Craddle input courant changed
1.2	24 Sep. 07	Change LED information, Add Laser regulatory

Introduction

The Scanwear is easy to use. Just press the trigger in order to switch on the scanner and simply press it again or move it to scan a barcode. The colours of the LED indicate the status of the device. Beep and LED indicate the status of the scanner as Good Read, Connected, etc… “No Data Loss Mode” function stores the last scans and is configurable by the user.

Barcodes are transmitted in real time to the remote host devices/terminals using Bluetooth wireless technology. You can download on our Website all software updates and additional documentations:

http://www.baracoda.com/

1. Craddle and Lanyard

1.1. Craddle

You can install the cradle on:
- a desk, you need to stick non-skid pad under cradle.
- a 1U steel bar, Hang on directly

1.2. Lanyard

You can only use Scanwear with lanyard. See picture for correct installation.

2. Battery

Recharge the internal battery by using the included AC adapter. The Adapter rating is 5V, 500mA.
When the scanner is charging, the LED is red (solid).
When the scanner is fully charged, the LED is green (solid).
A full recharge (from completely drained batteries) takes approximately 3 hours.
When the original batteries wear out, please contact your Baracoda reseller for replacements.

3. Switching on the reader

Remember to fully charge the battery before first use.

In order to switch on the scanner, please press the trigger.
The scanner will switch off alone after some period of inactivity (in its standard mode Scanner will switch off after 20 minutes of inactivity. This value can be modified by the user).

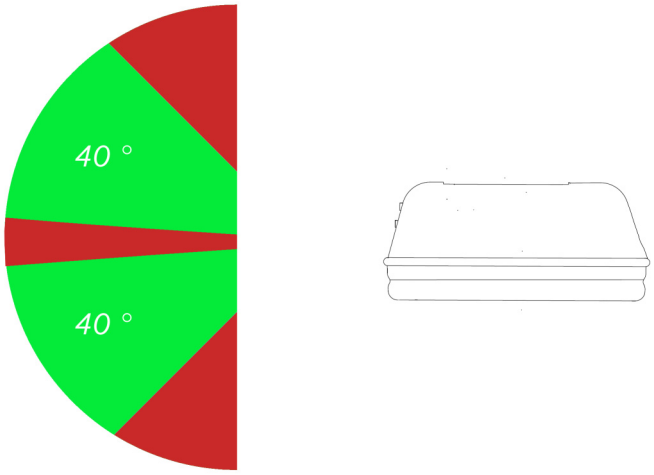
4. Quick Start up guide

4.1. How to read barcodes

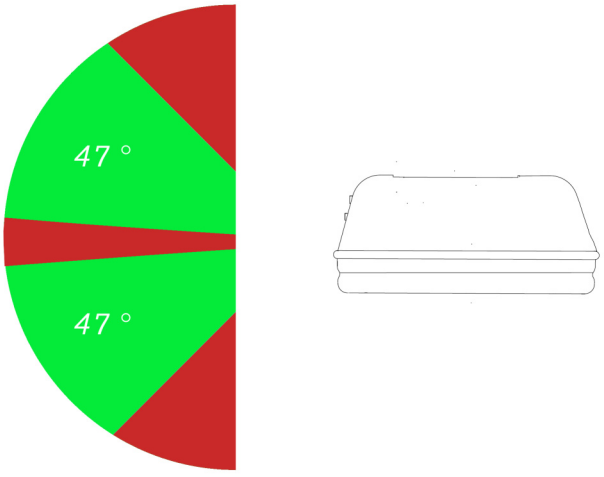
In order to switch on the scanner, please press the trigger.

Position the scanner so the light beam fully overlaps and crosses the bar code. The scanner will emit a beep when the scan is successful. You see below the correct scanning position.

BSW-L : Scanwear CMOS



BSW-LA : Scanwear Laser



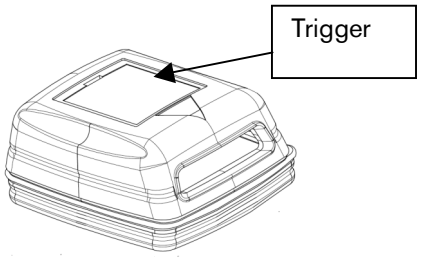
4.2. Usage mode

Real Time mode, Barcodes are transmitted in real time to the remote host (devices/terminals) using Bluetooth wireless technology (with acknowledgment from the host to the scanner) or, if the scanner is not connected, will memorise the data and later automatically upload it to a remote device/terminal (or Scanner can be set to operate only when connected to the host).

4.3. The different reading mode

4.3.1. Simple read

Simply press the trigger when you want to scan a barcode.



4.3.2. Motion sensor

You need execute a specific movement:

- Start horizontally
- Turn right
- Turn left
- Stabilize movement horizontally

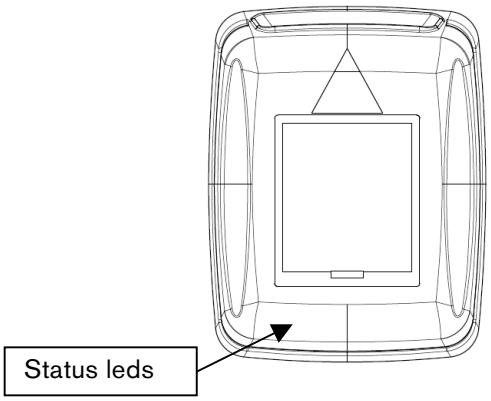
Barcode laser is started then scan a barcode

4.3.3. Autoscan mode

You can configure 'Autoscan mode' through BaracodaManager.

5. Status Display Summary

The ScanWear has three (3) LEDs where all functions are described below.



Operating Mode	LED	Status	Description
Battery	Red	Full	In Charge
	Green	Full	Charge completed
	Red	Blink	Battery low
	Red/Green/Blue	Blink	Switch on
Bluetooth	Blue	Long Blink	Connected to Host
	Blue	Fast Blink	Not Connected to Host
Scan barcode	Green	One single long blink	Good read
	Red	Blink	No host transmission Barcode lost Barcode reading failure

6. The different ways to connect scanner to a host

Baracoda proposes three (3) ways to simplify this process. Just choose the most appropriate one according to your specific needs.

6.1.1. For users : Fully Plug & Scan hardware solutions

That's the easiest way to associate our scanners with a host. Baracoda offers the RS232 Plug&Scan or the USB Plug&Scan dongle. If you have one of these devices:

1. Plug the dongle into the USB port or into the RS232 port of the computer.
2. Wait 5 seconds for the host computer to recognize the Plug&Scan dongle.
3. Do not scan any other barcodes except the barcode that pairs the scanner to the dongle ("Connect barcode", available in the box of the dongle).
4. Scan the "Connect barcode" just once.
5. Within less than 20 seconds the LED on the scanner will start double flashing green: you are now paired and connected!

If you have the USB dongle just open up the target application (such as Notepad, Excel and Word). Make sure the active cursor is where the user wants the barcode information to be placed and start scanning barcodes. If you have the RS232 Plug&Scan Dongle, your application will have to retrieve the information from the serial port, download Kemul Software on Baracoda Website http://www.baracoda.com/

Please note that the scanner are set by the Baracoda Plug&Scan USB in "no data loss mode" ON by default.
This implies that the reader will bufferise barcodes if the barcodes are read out of range.

6.1.2. For users: software solutions

Two software used to simplify the day-to-day usage of Bluetooth barcode devices are :

- K-Emul lets you insert the scanned barcode value in the selected field. It also allows adding a prefix and a suffix.
- BaracodaManager is a user-friendly, advanced software that, besides inserting the scanned barcode in a field of your application (Kemul plug-in) or displaying it (Terminal plug-in), presents the following features: very easy connection (one click connectivity), automatic reconnection, bufferisation of the data and automatic re-transmission.

The Baracoda Manager is the most advanced software of Baracoda. Please check compatibility for some specific hosts (see BaracodaManager compatibility table on www.baracoda.com).

How to quickly verify that your scanner is working correctly, using the BaracodaManager:

1. Make sure that your host device (PC or PDA) is Bluetooth enabled. If not, please contact your reseller.
2. Install the BaracodaManager (updates can be downloaded from http://www.baracoda.com/). Refer to compatibility table for specific hosts.

If your Bluetooth software is not compatible, you can test your scanner with Hyper terminal or Kemul. Refer to Communication Protocol documentation. (Download on http://www.baracoda.com/download.)

3. Configure the BaracodaManager.
    - Start the BaracodaManager by selecting Start> Programs> BaracodaManager> BaracodaManager. The application automatically searches for wireless scanners.
    - Place the scanner in discovering mode by pressing the trigger button.
    - Highlight the scanner in the Devices in range box and click add.
    - The Bluetooth connection asks for the passkey. While the message displays, click on the Bluetooth connection icon in the system tray at right side of the task bar.
    - Enter **0000** in the default Bluetooth Passkey Request dialog box.
    - Look at the status of the scanner in the BaracodaManager application window. When the status changes to "connected", the scanner is ready to be used.

4. The first time you configure a scanner, the BaracodaManager opens a terminal window. Scan a barcode and you will see the data appear in the terminal window
    - Close the Terminal window by clicking on exit
    - Select the plug-in from the drop down menu. For more information, see the BaracodaManager documentation.
5. When you have finished your session, click on exit of the application to save your configuration.

6.1.3. For developers: Baracoda SDK

The Baracoda SDK are conceive for developers who want to integrate the barcode collections functions into their own code, thus enabling end-users to run a single program (and not both the BaracodaManager and the user software)

BaracodaManager uses libraries that provide an abstraction layer allowing developers to integrate Baracoda products into their own application very rapidly. Moreover, these libraries will deal with all the low-level routines, timeouts, connection and configuration management.

These libraries are available to developers for free (www.baracoda.com for more information)

7. Configuring your scanner

BaracodaManager is software for settings the scanner.

7.1. Reset your scanner

To reset the scanner to its “default settings”, use BaracodaManager Software or scan the Reset configuration barcode.

Reset

/+$

7.2. Security

The Bluetooth connection is secured with a PIN code authentication.

You can configure security (enable/disable/change PIN code) through BaracodaManager.

The Security is enabling by default: default PIN code is **0000**.

7.3. No data loss mode

Baracoda has developed a proprietary communication protocol in order to enhance the security of the Bluetooth transmission.
Every barcode sent to the host must be acknowledged by the host (until then, the scanner will transmit it again and again).
This acknowledgment is disabled in default settings. It is strongly recommended to set ON this protocol acknowledgment on when using the scanner with the BaracodaManager.
Additionally, this protocol acknowledgment allows having an audio acknowledgment that the barcode has been successfully transmitted to the host.
You can configure or disable the scanner acknowledgement through BaracodaManager.

7.4. Symbology

You can enable/disable any type of barcode decoders with BaracodaManager.

7.5. Data format

The data format is the following :

Header	General_Prefix	Symbology_Prefix	Barcode	Symbology_Prefix	General_Suffix

7.5.1. Baracoda Header

It is a proprietary data encapsulation. It is necessary to activate the Baracoda header in 2 cases:

- to use the Baracoda keyboard emulation (Kemul) and Terminal
- to use the "No data loss" mode.

You can configure Baracoda Header through BaracodaManager.
The Baracoda header is enabled in default settings

7.5.2. General Prefix / Suffix

You can add a general prefix and/or a suffix to every barcode sent to the host device.
You can configure prefix/suffix through BaracodaManager.
There is no prefix/suffix in default settings

7.5.3. Symbology Prefix / Suffix

You can add a prefix and/or a suffix to specific symbology barcode sent to the host device.
Meaning a certain prefix/suffix will be added while reading a specific symbology.

You can configure prefix/suffix through BaracodaManager.
There is no "symbology prefix/suffix" in default settings

7.6. Beeps and LEDs

You can enable/disable Beeps / LED Lightening using both BaracodaManager.

7.7. Power management

Mutliple parameters exist for optimisation of battery such as "Sniff period", "Shutdown timer", etc…
Scanner works at 20 dBm.

7.8. Low battery

When the red LED is blinking, these indicate that the battery level is low. Recharge battery immediately.

Safety / Regulatory.

FCC:

Product FCCId:

QSHAIBSW

Interference statement:

This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Modification statement:

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Baracoda Wireless Technology, may void the user's authority to operate the equipment.

Class B digital devices regulatory notice:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by 1 or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio or television technician for help

Wireless notice

This product emits radio frequency energy, but the radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact with the antenna during normal operation is minimized. The system antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

EU:

This equipment is intended to be commercialised in all the countries of the European Union and there is no commercialisation or operational restrictions in any of the countries.
Hereby, Baracoda Wireless Technology declares that this Bluetooth barcode scanner is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The declaration of conformity may be consulted at:
http://www.baracoda.com/baracoda/librairie-doc/Baracoda-ScanWear-Declaration-of-Conformity.pdf

Laser notice

Use of controls or adjustments or performance of procedures other than those specified herein may result in exposure to hazardous visible laser light.
The laser scanner utilizes a low-power laser diode. Although staring directly at the laser beam momentarily causes no known biological damage, avoid staring at the beam as one would with any very strong light source, such as the sun. Avoid that the laser beam hits the eye of an observer, even through reflective surfaces such as mirrors, etc.

The following information is shown on the laser scanner device class label:

RAYONNEMENT LASER
NE PAS REGARDER DANS LE FAISCEAU
APPAREIL A LASER DE CLASSE 2
LASER RADIATION
DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT

Limited Warranty

Manufacturer warrants that the product will be free of defects in material and workmanship for one (1) year from the date of shipment. Manufacturer will, at its option, either repair, replace or refund the purchase price paid by buyer for the defective products.
Such repair, replacement or refund shall be buyer's sole remedy in the event of Manufacturer's breach of this limited warranty. Repaired or replaced parts or product may include new, reconditioned or remanufactured parts and equipment at Manufacturer's option. All costs associated with shipment to Manufacturer for warranty service, including but not limited to freight, duties, insurance and customs fees are buyer's responsibility. Manufacturer will pay the freight costs (duties, insurance, customs and any other fees are buyer's responsibility) associated with the return shipment to buyer. The method of shipment will be at Manufacturer's discretion. Repair or replacement of any parts or equipment does not extend the period of warranty provided for herein. THIS LIMITED WARRANTY IS MANUFACTURER'S ONLY WARRANTY. MANUFACTURER DOES NOT GIVE WARRANTIES OF MERCHANTABILITY OR WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. To take advantage of this warranty, buyer should contact the seller not the Manufacturer. The warranty set forth herein does not cover and Manufacturer will have no obligations hereunder if any non-conformance is caused in whole or in part by; accident, transportation, neglect, misuse, alteration, modification, or enhancement of the products or incorporation, interfacing, attachment of any feature, program, or device to the Products by a person or entity other than Manufacturer, failure to provide a suitable installation environment, use of the products for other than the specific purpose for which the products are designed or any use of the product not in accordance with the User Guide or other misuse or abuse of the product. The warranty does not cover problems linked to batteries.